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KNOWLEDGE

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OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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This past Memorial Day marked the beginning of the Army's 101 Critical Days of Summer safety campaign. The campaign highlights those on- and off-duty actions that historically affect our Army and claim the lives of Soldiers, Civilians and Families in our formations. This campaign reminds us, as Soldiers, our obligation to engage our Team, making a positive difference through briefings, demonstrations and/or discussions.



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> "**ENGAGE** with those around you, **EDUCATE** your Soldiers, and take steps to solidify the **'BAND OF BROTHERS'** concept that embraces **EVERY MEMBER** of our **ARMY TEAM.**"

As we engage as leaders in the 101 Critical Days of Summer messaging, think back to effective messages you've heard. One message I vividly recall was given by then MG Dick Cody, CG, 101st Airborne Division (AASLT). His simple, yet powerful, message delivered to the entire 101st Airborne Division was founded on the statistical analysis that predicted the 101st would experience two Soldier fatalities during the upcoming Memorial Day weekend. As we gathered shoulder to shoulder with some 20,000 of our comrades, MG Cody asked us, "Who in this crowd will we let die?"

My challenge to you and our Army during these 101 Critical Days of Summer is deliver a simple but effective message proclaiming, "I can save my life and that of my comrade." Engage with those around you, educate your Soldiers, and take steps to solidify the "Band of Brothers" concept that embraces every member of our Army team. This powerful concept empowers each member, each leader and each teammate to look out for and protect one another. It encourages them to share insights and ensures the Soldiers beside them will never become a fallen comrade.

While these warming months are indeed a time for outdoor family activities, team-building sporting events with fellow Soldiers and traveling, they are also months when we must be vigilant. Engaged leaders accurately identifying risks make a profound difference between enjoying off-duty activities and becoming statistics in the database.

Remember, engaged leadership at every echelon saves lives, and every member of our Army team makes a difference. Let's not mar off-duty and family activities with unnecessary accidents and injuries – Never Give Safety a Day Off. «

Army Safe is Army Strong.



William H. Forrester
Brigadier General, USA
Commanding

NEVER GIVE SAFETY A DAY OFF

The weather's turning nice and the days are getting longer. It's party time with everything from Frisbees to fast boats getting a summer workout. Good weather and long days make summer a prime time for vacations. With so much to do and enjoy, it's easy to overlook the "gotchas" that can easily sidetrack your summer plans with a hospital visit (or worse!). This year's 101 Critical Days of Summer safety campaign runs from May 28 through Sept. 3, and is themed "Never Give Safety a Day Off." The following suggestions are offered to help make your summer a fun and safe one.

BOB VAN ELSBERG
U.S. Army Combat Readiness Center
Fort Rucker, Ala.

On the road again

It's probably no surprise the greatest opportunity for gotchas is while you're on the road. No rocket science is needed here—it's just a matter of recognizing that with so many others doing the same thing, highways are a "target-rich" environment for gotchas. During last year's 101 Critical Days of Summer Safety, there were 38 fatal vehicle and motorcycle accidents. A look at those numbers provides some interesting insights. While privately owned vehicles accounted for 19 of those accidents, motorcycles accounted for almost as many with 17 fatal crashes. In

addition, two Soldiers died while riding all-terrain vehicles. Although far fewer Soldiers ride motorcycles than drive cars or pickups, the high rate of fatalities reflects the findings of the National Highway Traffic Safety Administration. Compared to car drivers, they found motorcyclists were 32 times more likely to die and six times more likely to be injured in a crash. One recent trend is the rising age of motorcycle riders killed in crashes. One reason suggested by Pat Hahn of the Minnesota Motorcycle Safety Center is that these riders are accustomed to the protection they've enjoyed inside automobiles and unaware of how vulnerable they are on a motorcycle.

Looking at these accidents, fatigue, driving under the influence and speeding were frequent contributing factors. The best protection Soldiers have is to plan for a safe trip (see TRiPS online at https://crc.army.mil/trips) and wear seat belts in POVs or helmets and proper personal protective equipment when motorcycling. Also, many of these accidents were caused by others on the road. Following simple defensive driving techniques—like the "two-second following rule"—can protect Soldiers from the mistakes of others.



FYI

For more information on the Army's 101 Critical Days of Summer safety campaign, check out the U.S. Army Combat Readiness Center's Web site at https://crc.army.mil.

> The best **PROTECTION** Soldiers have is to **PLAN** for a safe trip and **WEAR SEAT BELTS** in POVs or **HELMETS** and **PROPER PERSONAL PROTECTIVE EQUIPMENT** when motorcycling.

Keeping summer fun, not fatal

Swimming is an attractive option when temperatures rise. However, five of the seven recreational fatal or permanently disabling accidents last year happened to Soldiers who were swimming or boating. Three of those Soldiers dove into shallow water, broke their necks and will spend the rest of their lives as quadriplegics. One Soldier, who couldn't swim, drowned when he slipped away from a friend teaching him to float and jumped off the diving board into a pool. Another died when he got off a paddleboat he was sharing with two other Soldiers, drifted away and drowned before he could be rescued. The U.S. Lifesaving Association's Web site at http://www.usla.org/PublicInfo/safety.asp offers good tips on water safety.

The two other fatalities involved a Soldier being struck by a vehicle while crossing a major thoroughfare on foot. Also, a young Soldier who was weightlifting at a gym collapsed, stopped breathing and died.

Ouches

There were 115 non-fatal off-duty accidents during last year's 101 Critical Days of Summer safety campaign. More than one-fourth of those accidents involved Soldiers proving the law of gravity still works. Here are a few examples:

- After drinking alcohol, a Soldier jumped from the 5th floor of his billets and suffered multiple injuries.
- A Soldier was attempting to sit on the edge of a barracks roof when he slipped and fell.
- While sleeping on a top bunk, a Soldier rolled off and hit the floor.
- A Soldier fell down his stairs after tripping over the family cat.

Aside from these examples, bicycle and softball were the top injury producers. For example, several bicycle accidents might have been prevented had riders looked ahead and identified hazards such as potholes, bumps in the road, loose gravel and fallen branches. Basketball is an aggressive game, but getting "air" time is less fun if you have to be carried away after a bad landing or a collision with another player. Also, softballs aren't soft if you inadvertently get nailed by a line drive, and break-away bases beat broken ankles every time.

So what can you do to stay safe while having fun this summer? That's simple, use CRM and think ahead. Plan your road trips so you have plenty of time to get to and from your destination without having to drive fatigued. Also, wearing a seat belt is the



ACTING SA
SAFETY MI

For the second consecutive year, Soldier accidental fatalities are on the decline. Nevertheless, the estimated 220 Soldiers we will lose this year to accidents are 220 too many. Moreover, our active and reserve forces will suffer more than a half-million nonbattle injuries—an average of one per Soldier—and our civilian workforce injuries are rising, resulting in personal tragedies and degraded abilities of a valuable component of our Army team. Two-thirds of our major accidents occur off duty; and even for those on duty, poor decisions are at the heart of most incidents. The vast majority of military and civilian mishaps are clearly



one protective measure you can always take; it's your ace-in-the-hole for safety. In addition, alcohol will not improve your skills behind the wheel. If you must hit the road after drinking, make sure you have a responsible, sober designated driver. If enjoying the water is part of your summer plans, make sure you can swim and always wear your life jacket when boating.

Staying safe is mostly using good common sense. And isn't that what the five steps of CRM are about anyway?

- Identify the hazards
- Assess their dangers
- Develop a plan to reduce or eliminate those hazards
- Follow through with your plan
- Evaluate how well your plan worked

For more information on the Army's 101 Critical Days of Summer safety campaign, check out the U.S. Army Combat Readiness Center Web site at https://crc.army.mil. «

A AND CSA SEND ESSAGE TO THE ARMY

preventable. It is our obligation to ensure our Soldiers, civilian employees, family members and contractors have a safe, healthy working and living environment.

To best preserve our combat power, our strategy is to fully achieve what we have already begun through implementation of the following:

- Establish a culture where safety is a way of life during training, operations and off duty.
- Build a command climate where preventable loss is unacceptable.
- Ensure leader engagement and accountability for their programs.
- Develop executable safety plans for mission success.

We will institutionalize these tenets through all Army commands, with our ultimate aim to personalize safety for each individual. The lynchpin for our success is the leader, and we expect leaders at all levels to personally engage those they lead. Know your Soldiers and civilian employees. Coach, teach and mentor them.





As we continue to fight terror across the globe, we cannot squander our precious human capital on senseless losses. Through firm resolve in this most vital endeavor, together we will stay Army Strong.

—Mr. Pete Geren assumed his duties as Acting Secretary of the Army March 9, 2007, and will continue serving concurrently as the Under Secretary of the Army. GEN George W. Casey Jr. became the 36th Chief of Staff, United States Army, on April 10, 2007. This was from a message to the Army dated May 9, 2007. «

CAN DO VERSUS MUST DO

CPT TRAVIS L. MCINTOSH
E Company, 1st Battalion, 212th Aviation Regiment
Fort Rucker, Ala.

We push to have a "can-do" attitude. Most would agree that when you believe you can accomplish whatever you try, you're much more likely to reach your goals if you have a positive attitude. A positive outlook can energize you. A can-do spirit can supply you with the momentum you need to get through the most challenging and unforeseen circumstances. Your chain of command wants you to have a can-do attitude. However, there is a mature balance between can-do and must-do that we, as leaders, must learn to control.

In our profession, one of the most challenging—and most destructive—habits is the tendency to allow this can-do attitude to persist into a must-do action. As we continue to manage risk across the full spectrum of our mission, the instructor pilots in E Company, 1-212th Aviation Regiment (UH-60 Flight School XXI), share a common slogan, "Is this a *Can Do* or *Must Do* action that I'm about to take?" It is our nature to have a can-do attitude in the military, especially as aviators. However, too much of this approach turns our actions into must-do insistent events, which may result in a driven catastrophic failure. Consider the following definitions:

- **Can Do** – An action, in which I'm trained, qualified, equipped and prepared to execute. It will be challenging and most likely require the utmost skill on my part. This action will strongly support the mission and serve to equally benefit the unit, the team and the individuals involved. It requires motivation, preparation and hard work to fit in the can-do category. My command and the policies in place will undoubtedly support the action and any decisions included in its execution.
- **Must Do** – An action when closely looked at upon its completion would be considered unnecessary and driven. I'm allowing a goal, policy or an individual/co-pilot/air traffic controller to influence this action outside the scope of its intended purpose. This action no longer applies to the emplaced control measures; I'm not resourced, I'm rushed and I'm cutting corners to gain success or an advantage; or I feel it necessary and driven from an external influence. I'm forcing an irreversible outcome.

An accident is often categorized as either a random or driven failure of the individual or his equipment. There certainly is parallel meaning to "random vs. driven" and "can do vs. must do." Have you ever rushed a preflight or walk-around inspection? Have you ever increased your airspeed

significantly to not miss downtime or launched without checking Notices to Airmen or the MITA/hazards map? Did you skip table talk or not close out the flight records today? These are all examples of when you were the leading witness into a driven failure. Due to something you felt we "must do," a shortcut was made or an action was taken outside the scope of its intended purpose and no longer applied to the emplaced control measures.

The next time you consider placing the aircraft in an unsafe flight profile or even drive your car excessively fast or over a long distance without adequate rest … know that you're only moments away from a driven and catastrophic failure. *Can Do* or *Must Do* … that is the question. ≪

FIGHTING COMBAT FATIGUE

DR. PATRICIA LEDUC
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Fort Rucker, Ala.



The U.S. Army Aeromedical Research Laboratory recently conducted research on the usefulness of stimulants, specifically Dexedrine and Modafinil, to counteract fatigue in aviation crews.

USAARL assessed aircrews' flight performance and mood evaluations throughout a 40-hour period without sleep. These sleep loss studies were conducted at USAARL with either single-pilot or two-pilot crews. Volunteer pilots in the single-pilot studies were given twice as much stimulants as pilots who volunteered for the two-pilot crew research. The higher dose is the one currently recommended for use when stimulants are necessary in sustained operation scenarios.

In general, the lower-dose groups reported less tension and irritability. Pilots taking the lower dose of Modafinil tended to show superior results on all flight maneuvers when compared to those pilots given the higher dose. The lower-dose group also reported more energy than the higher-dose group at comparable levels of sleep loss. Pilots given the higher dose of Dexedrine were only better on the hover flight maneuver than the low-dose group, but they reported being more tense and more irritable.

Since it is unlikely the lower doses of the stimulants were behaviorally superior to the higher doses, the most plausible reason for these lack of differences produced by more drug were the psychosocial effects of having another aviator in the next seat. The second crewmember performed the duties of co-pilot, colleague, alertness monitor, etc., and almost surely affected flight performance and mood.

As aircrews typically operate as teams in the real world, more representative studies examining fatigue countermeasures may be needed. These findings show that stimulant medications can assist the warfighter in maintaining acceptable levels of judgment and decision making, as well as crew coordination, when combat requirements dictate long periods of sleep deprivation. They also suggest that smaller doses may be just as effective in two-man crews as higher doses are for single pilots. Clearly, future research will also be needed to examine the resilience and vulnerability of team behavior as a fatigue countermeasure. ≪

HEAT of the moment

LTC(P) RICHARD KOUCHERAVY
U.S. Army Combat Readiness Center
Fort Rucker, Ala.

Dehydration, lack of acclimatization, blazing temperatures, high humidity and heavy workloads can rapidly lead to heat injuries. Heat cramps or heat exhaustion, if undetected or left untreated, can rapidly lead to heat stroke, which can be fatal. That's a fact I've known since the day I nearly died more than 20 years ago.

I remember the summer of 1985 as the time I graduated the U.S. Military Academy and was commissioned into Army Aviation. I'd driven my air-conditioned 1984 Chevy Camaro to Fort Benning, Ga., after finishing my graduation leave in the Northeast. On the next day, I was running, doing calisthenics and screaming "Airborne!" to all who would listen. On the third day of "Ground Week," I headed out on a four-mile run in the center of a very large PT formation full of highly motivated Airborne "wannabes." I started with them, but I didn't finish. Instead, I made a trip to Martin Army Hospital in a deuce-and-a-half and almost left by way of a hearse.

I remember little of what happened that morning, but friends later told me I simply collapsed mid-stride and knocked over a few other students. I was helped into the back of a deuce-and-a-half truck that was trailing the formation to pick up stragglers. When the PT formation returned to the company area about 7:30 a.m., the students cooled down, were sent to chow and then came back for training at 9 a.m. I was absent from both the cool down and the accountability formations. To this day, I don't know if anyone even attempted to locate me.

About 10 a.m., someone noticed my absence and started looking for me. Prompted by a fellow student who was concerned for this "fallen comrade," at least one trainer joined in the search. When they found me, I was still lying in the back of the deuce-and-a-half, unconscious and with a core body temperature ranging somewhere between 106 and 108 degrees. I was near death and it was only through the quick thinking of my fellow student and one very sharp Army physician's assistant—trained at the Army Special Warfare School—that I was saved from dying right there in the shadows of Fort Benning's famous jump towers.

For the next three-and-a-half weeks, I spent all of my time at Martin Army Hospital, the guest of some very committed Army doctors, nurses and other medical specialists. After the first 10 days, I was taken from the intensive care ward, but only after my temperature stabilized and my memory had returned.

After nearly a month, I left the hospital under my own power. By then, most of my memory had returned. I recall clearly the difficulty I had climbing the stairs to my guest room on post to retrieve my personal gear before heading off on convalescent leave. It was another three or four months before I could participate in a reasonable Army PT program again.

I learned some lessons that summer which I'll share with you. First, leaders must stay engaged and watch Soldiers closely when training in high temperatures. The training unit I was assigned had more than 450 students running in formation, yet I don't recall more than three or four

trainers being present—including the Soldier driving the cargo truck. I'm told neither the company commander nor the first sergeant were present for training that morning.

who hadn't been south of West Point, N.Y., during the previous two years. Because I wasn't acclimated to Fort Benning's nasty summer weather, it might have been wiser for me to have spent a

> "I started with them, but I didn't **FINISH**. Instead, I made a trip to **MARTIN army HOSPITAL** in a deuce-and-a-half and almost left by way of a **HEARSE**."

FYI



In the story "What Is Heat Stroke?" in our May issue, we said not to give heat stroke victims fluids to drink. The reason is to prevent victims who are vomiting or slipping in and out of consciousness from inhaling fluids into their lungs. Victims who are alert may be given sips of cool water.

Second, you must allow people time to acclimate if they've not been exposed to high temperatures and humidity. I may have been young and fit, but summers in the South are brutal, especially to someone

week to 10 days acclimatizing and conducting limited physical training before going at it full speed. If you're a leader, find out which of your new people aren't accustomed to the weather where you're training. Give them time to acclimate and become properly hydrated while gradually working them into physical activities.

Third, keep accountability of those in your care, even if it means frequently conducting head counts and checking on peoples' whereabouts. This is especially critical when doing physical training in hazardous environments. Had I been given immediate medical care, I would have had a minor injury rather than a near-death experience. Instead, I was left alone—injured and unattended—even though my squad leader, fellow students and trainers all knew I'd fallen. They just assumed someone else knew where I was.

The fourth lesson is for leaders to know the symptoms of heat injuries and never underestimate how rapidly heat can turn minor injuries into life-threatening ones.

Fortunately for me, there were a few people present that morning who understood some of these things and I owe them my life. I hope my story will help you, as a leader, understand how vital your responsibilities are when you're training Soldiers in heat that can kill. «



A DAY ON TH

This story reveals a close call that occurred during a late-spring day in the Texas coastal estuary known as Christmas Bay.

If you're not familiar with estuary wade-fishing, it's hard to explain the allure of hunting fish on foot. I normally go after "The Big Three"—speckled sea trout, redfish and flounder. What makes this kind of fishing fun is that you never know what you're going to get—except that it will probably have teeth. The rare 3- to 4-foot-long shark will occasionally appear, but usually not until later in the season.

I'd planned ahead for my day on Christmas Bay. I'd assembled my fishing tackle, including my stringer—a long thin rope I'd run between the fishes' gills and mouth to keep them from escaping. I'd also checked the weather, and it was perfect for fishing. A strong early morning tide promised a successful catch.

I got to the bay at 4:30 a.m. It was a couple of hours before sunrise and I needed to hurry to catch the rising tide. The waters were still a bit chilly, so I donned my neoprene waders to help ward off the cold. As I gathered my equipment, I realized the quick-release clasp on my stringer was missing. No problem—I'd improvise by looping the stringer through my belt several times.

I looked at the familiar reference lights across the bay to help guide me as I entered the water. As I did, I began the "bay shuffle"—a technique to keep from stepping on stingrays and getting a tail barb in your leg or foot. I also wore stingray guards on my legs as an extra precaution.

I'd been fishing about three hours when the sun rose and beautifully silhouetted the coastline. My stringer contained several fish and it was time to walk back. I had chosen an indirect route so I'd have a fairly hard bottom for easy walking. I was about 300 yards from the shore and could see my truck in the distance. The high tide had entered the bay and the water was a little over waist deep.

As I was walking, the water behind me suddenly exploded. I turned around and saw the fish on my stringer struggling against something. I immediately grabbed the stringer and began pulling it toward me. BIG mistake! The largest speckled trout was nearly gone—completely bitten off behind the head. A quick check of the water around me revealed I wasn't alone. I counted one … two … three … no—four shark fins circling me!

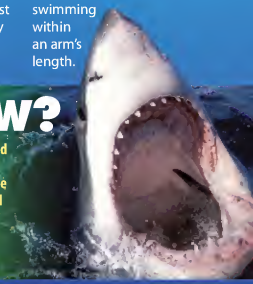
I struggled to remove the stringer from my belt as I headed for shallower water about 100 yards away. The sharks kept following me and circling as they attacked the fish on my stringer. With each succeeding attack, the tugs got stronger and more aggressive. The largest shark was around 4 feet long—a formidable-sized predator, especially when part of a group. He began testing me as prey, swimming within an arm's length.

Using the handle of my fishing rod, I lunged toward him and struck a single blow just behind the gills. His sleek shape slapped the water in front of me as he knocked my hand to one side.

The water where I was headed was about 2 feet deep—shallow enough to protect me from the sharks. To get there, however, I had to swim across a much deeper small-boat channel marked off by metal pipes. Were I to have a chance, I had to get rid of the day's catch.

DID YOU KNOW?

The International Shark Attack File (ISAF) investigated 96 alleged incidents of shark-human interaction occurring worldwide in 2006. Upon review, 62 of these incidents represented confirmed cases of unprovoked shark attack on humans. Find more facts on shark attacks from the Florida Museum of Natural History Web site at http://www.flmnh.ufl.edu/fish/sharks/.



E BAY

CW4 IAN F. MILLS
B Troop, 7th Sqdn., 6th Cav. Regt. (USAR)
Conroe, Texas

Keeping an eye on my pursuers as best I could, I finally freed myself of the stringer. The sharks closed in and blood surrounded a group of fish that would never make it to my table.

I began swimming across the channel. For the first time I noticed my heart pounding in my chest and the adrenaline in my system. Each stroke brought me closer to safety as the sharks—occupied by their fish-on-a-rope dinner—fell farther behind.

When I got back to the shore and my truck, I inventoried my equipment. Although I'd managed to save my fishing rod, I'd donated several fish, a stringer line, a box of tackle and my lucky fishing hat to the sharks. However, I still had the most important thing—my life—and took away some important lessons learned. I'll share those with you:

- Complacency can injure or kill you by blinding you to hazards. Not realizing how adaptable various species can be, I didn't expect to see any sharks that day. I'd overlooked the first two steps of Composite Risk Management—identifying and assessing the hazards.
- Use the buddy system during off-duty activities. I'd fished alone in this spot on countless occasions. However, it only took getting into trouble once for me to appreciate the value of having someone else to cover my back.
- Check your equipment to ensure you have everything you need and that it's functioning properly. Don't ignore the small stuff because you think it's unimportant. My stringer's missing quick-release clasp became very important when those sharks began using my fish as appetizers while working their way up to the main course—me.
- Contingency planning can help you survive unexpected, dangerous situations. The key, however, is planning before getting into trouble. This is step three of CRM, developing controls and making decisions. The alternative is trying to come up with a plan after trouble starts. This is typically called "panic."

Finally, don't ever quit what you love doing during your free time. Instead, assess the risks before and during your activities and, afterward, think about how well you planned for them. Chances are you've already survived many dangerous situations just executing your combat missions. Why let complacency or indiscipline make you the victim of an avoidable off-duty accident? It goes without saying you have a responsibility to your unit, family and friends to not let that happen.

Enjoy doing the things you love this summer by doing them safely. And if you want to try out wade-fishing, I'll be looking for you on the bay! «

CREW COORDINATION EQUALS BATTLEFI

SEAN MORRILL
4th Brigade Combat Team, 4th Infantry Division
Fort Hood, Texas

Technological advancements continue to provide today's Soldiers with greater capabilities than ever before. Armor enhancements, ballistic glass and additional mission equipment in Army vehicles all offer extra protection on the battlefield. However, these advancements have come at a price for vehicle crews who've had to cope with restricted outside visibility and altered vehicle handling. As the Army continues to improve and upgrade its combat vehicles, the need for effective crew coordination and communication has become essential for crews to safely complete their missions.

Army Aviation has long used aircrew coordination, a system that improves an aircrew's interaction and efficiency, in safely accomplishing their missions. This time-proven program reduces accidents and improves the effectiveness of crews in both peace and wartime. The good news is this system is easily transferable to Army vehicles and can equally benefit ground crews.

Basic qualities of effective crews

Effective vehicle crews are made up of assertive crewmembers who provide input to the vehicle commander. Every crewmember knows he or she is a part of the team and is willing to help without being asked. The entire crew acts as a team in mission planning, execution and after-action reviews and, with the exception of short-notice missions or high-workload conditions, analyzes information and contributes to decisions.

Vehicle commanders establish an open, professional climate at the beginning of every mission. Effective crews maintain this



ELD SUCCESS

atmosphere by communicating vital information in a clear, timely manner so conditions, actions and decisions are clearly understood. Finally, effective crews view AARs as learning experiences that can enhance future crew performance.

Some good crews do these things without having a background in crew coordination training. They intuitively know they need to have open communications, provide professional input and work as a team in support of the vehicle commander.

Crew coordination objectives

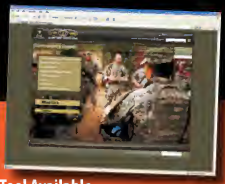
The aviation crew coordination system has five main objectives that can be observed, sensed and measured. These objectives also can be applied to ground vehicles:

- **Establishing and maintaining team relationships.** Vehicle commanders create an open crew climate and maintain it throughout the mission. Good vehicle commanders use their authority, but don't operate without input from the rest of the crew.
- **Mission planning and rehearsals.** Pre-mission tasks, inspections and checks are completed by the crew. The crew discusses and thinks through contingencies like rollovers, fires, casualties and actions on contact.
- **Establish and maintain workload levels.** Actions are prioritized and workloads distributed equally or in a way that makes the best sense.
- **Exchange mission information.** Crews send information in a clear, timely and complete way.
- **Cross-monitor performance.** Crewmembers mutually cross monitor each other to ensure tasks get done and to enhance crew situational awareness.

Crew coordination elements

The aviation model also defines basic crew coordination elements as things that individuals in a vehicle crew can do to enhance overall crew effectiveness. Explanations and examples of each for vehicle crews are as follows:

- **Communicate positively.** Positive crew communication ensures the message gets through.



FYI

Improved Commander's Corner Tool Available

The Commander's Corner Web site has recently been revised to give leaders at every level a single page providing quick and easy access to vital safety information. The site's goal is to help leaders implement Composite Risk Management processes to help keep their Soldiers in the fight and preserve the combat power of their formations. For more information on Commander's Corner, visit the USACRC Web site at https://crc.army.mil/commanderscorner/ or call 334-255-2381.



■ **Direct assistance.** Vehicle crews should direct assistance when they need it.

■ **Announce actions.** Announcing actions ensures everyone is aware of what is happening.

■ **Offer assistance.** Offering assistance to a crewmember who is especially busy or needs help benefits the whole crew and is something all should be prepared to do without being asked.

■ **Acknowledge actions.** Acknowledging actions ensures those taking them know that everyone is aware. A "Roger" callout may be all that is needed and maintains crew situational awareness.

■ **Be clear and precise.** Using plain or standardized terms and avoiding slang ensures everyone understands what you're saying. Ambiguous words or phrases like "I have it" or "Right" can have more that one meaning and bring about an incorrect response.

■ **Provide vehicle control and hazard advisories.** All crewmembers should be prepared to assist the driver in avoiding road hazards, traffic, canal edges or other things they may not see due to the reduced visibility in up-armored Army Motor Vehicles and Army Combat Vehicles.

■ **Coordinate action sequence and timing so crew actions mesh.** Sequencing actions and timing can be critical during weapons engagements, loading of ammunition, turret movements and while maneuvering the vehicle in combat.

Standard crew terminology

Standardized words and phrases, such as those used in radio transmissions, help crews avoid confusion and allow them to react more quickly and efficiently. Using words known by everyone in the crew also prevents them from having to be repeated. If the operator's manuals have a standard callout or term for a piece of equipment, get in the habit of using it, especially if a new crewmember joins the team. If someone doesn't understand what you said, try saying it another way or in clearer terms instead of repeating it multiple times or raising your voice.

Situational awareness

To ensure the whole crew maintains situational awareness, keep an open flow of information. Also, keep chatter or non-relevant conversations to a minimum. Conversations should be limited to mission-focused communications during critical times or events. The vehicle's intercom system should be used to enhance crew communications and checked prior to the mission to ensure it works. Be sure to clarify if what you said is not understood. Likewise, ask other crewmembers if you don't know what was said or is happening.

Crew coordination is more of an art than science and requires continuous practice. Good crews constantly work on improving their coordination and use AARs as a forum for future crew improvement. These combat-proven techniques can help you better accomplish your missions and prevent accidents. Discuss these methods with your crew and practice them on every mission. I think you'll be glad you did. «



AND THE AWARD GOES TO...

CW4 JON STURNICK
U.S. Army Combat Readiness Center
Fort Rucker, Ala.

The Broken Wing Award recognizes aircrew members who demonstrate a high degree of professional skill while recovering from an in-flight failure or malfunction requiring an emergency landing. Requirements for the award are listed in Army Regulation 672-74, *Army Accident Prevention Awards*. The U.S. Army Combat Readiness Center Commanding General recently approved the following awards.

CW4 JAMES TURNER and CW3 MARC LATIMER
Corpus Christi Army Depot, Corpus Christi, Texas
Oct. 11, 2006
UH-60A

During a maintenance test flight, the crew, CW4 James Turner and CW3 Marc Latimer, experienced simultaneous emergencies of increasing RPMr on the No. 2 engine and decreasing RPMr on the No. 1 engine, torque split, No. 1 engine alternator failure, vertical instrument display system failure and probable failure of the power available spindle on the No. 1 engine power control lever. The crew was challenged with incorrect engine and system indications, but they troubleshot the failures until they were able to execute a safe landing. The pilots utilized experience, crew coordination and skill to diagnose and manipulate the engine PCLs to control an emergency situation not covered in training or the operator's manual to land with power. For approximately three minutes and 20 seconds, they manipulated the PCLs, managed available power and troubleshot their indications through marginal visual flight rules conditions to a safe roll-on landing point. Faced with required immediate action, the pilots safely landed the aircraft, preventing serious injury to crew and a Class A aircraft loss.

CW4 ANDREW ISAAC and 1LT CHRISTIAN O'LEARY
B Company, 1-183rd, 82nd Combat Aviation Brigade, 82nd Airborne Division, Task Force Talon
Dec. 23, 2006
AH-64A

While conducting a border reconnaissance mission along the Afghanistan and Pakistan border in support of Operation Enduring Freedom VII, CW4 Andrew Isaac and 1LT Christian O'Leary were paired with a UH-60L. Crossing mountainous terrain at 9,500 MSL (500 feet AGL), the crew noticed a strong burning smell in both cockpits. Seconds later, the OIL ACCESSORY PSI caution/warning light illuminated, followed by a loud thud from the transmission area. CW4 Isaac, the pilot in command, immediately assessed the situation and determined the aircraft needed to be landed as soon as possible. 1LT O'Leary transmitted emergency landing intentions to their UH-60L sister ship. Simultaneously, CW4 Isaac slowed the aircraft from 110 knots free cruise toward the only suitable landing area in sight. During their descent, the crew's choice for landing changed several times due to heavy snow, slopes and trees in the landing areas. On final approach, the shaft-driven compressor and clamp holding the compressor in place failed, allowing oil to escape the accessory gearbox and burn. The rear cockpit filled with smoke, and CW4 Isaac transferred the controls to his front-seater. 1LT O'Leary adjusted the approach path to a snow-covered streambed surrounded by pine trees 300 meters short of their intended landing area. 1LT O'Leary completed a whiteout landing to a 70-foot by 100-foot landing area with near-zero visibility in his cockpit and zero visibility within the backseat cockpit. CW4 Isaac immediately completed emergency shutdown procedures and the crew exited the aircraft without injury or further damage to their aircraft. The crew estimated the entire event from onset to landing was less than 45 seconds. Faced with required immediate action, the pilots safely landed the aircraft, preventing serious injury to crew and a Class A aircraft loss.

FALCONVI

THE FUTURE IS

One of the key tasks in preparing for any visual flight rules flight is map preparation. Even with the introduction of global positioning system navigation, map preparation is an essential element in obtaining situational awareness and familiarizing yourself and your crew on where and how a flight is to take place. This can be a daunting task, especially when trying to plot all the possible hazards while, at the same time, transcribing information from one map to another.

Let's take a look at a practical scenario. Imagine you've been given an operations order for a mission requiring four UH-60M assault aircraft and two AH-64D attack aircraft to infiltrate a target in a non-permissive country. The mission requires using the Apaches and other close air support aircraft to soften up the target area before the Black Hawks go in. You're the lead planner for the Black Hawks and must coordinate the mission with the attack and close air support aircraft.

The good news is you've got a new tool to help you plan the key elements of your mission. FalconView can help you plan for every action and threat and give you the greatest chance for success.

What is FalconView?

FalconView is the mapping portion of the Portable Flight Planning Software, the foundation for the Army's Aviation Mission Planning System. FalconView displays various types and scales of maps to include elevation data, aeronautical charts, satellite imagery and geographically referenced overlays.

FalconView also supports a large number of overlay types that can be displayed over any map background. The current overlay set is targeted toward military mission planning users and oriented toward aviators and aviation support personnel. Some of the overlays available are templated threat systems with intervisibility, acquisition and tracking ranges for many anti-aircraft systems, surface danger zones for most aerial-fired weapons systems and munitions, airports, airspace, hazards, manual and electronic chart users update manuals, and a large menu of user-adapted drawings and waypoints selection. Essentially, when a user plans a mission using FalconView, the user's drop-and-drag waypoint data is transferred into a flight data card that calculates times, distances, headings, altitudes, temperatures, ground speeds, aircraft gross weight, hover torque available and required, and even fuel burn rates if the software is set up correctly for the specific aircraft and flight envelope.

So you've received your mission and have your attack planner at your side. You've received the Common Operational Picture data from the S-2 containing all templated threat and enemy positions along with friendly positions. First, you set up the AMPS software with the type aircraft you're flying, using the heaviest and slowest aircraft conditions to set parameters for the calculations that will be done upon completion of your plan, or to check fuel statuses or any other concern you may have during the planning. You also will need to open your weight and balance program with the predicted load, using the heaviest aircraft weight, and then open your performance planning program, using worst-case data input for ambient conditions.

Once you're set up, you can begin the process of route planning. Naturally, you'll select the scale of map that will give you the big picture. Depending on the distances that will be flown, this can be as large as a 1:5,000,000 or as small as a 1:12,500. The map appears with all the Common Operational Picture information that affects the planning of your route graphically presented to you, including borders, airspace, airports, hazards and operational overlays.

You can begin to reverse plan your route by zooming in on the target to one meter resolution imagery. Your target comes up in beautiful resolution and you have a bird's-eye view, north-up photograph with all of your threats depicted in and around the target. You can even see building layouts, trees, wire poles, lights, gun emplacements, armored vehicles and even enemy Soldiers. But more importantly, you can see where you're going to air land or rope your customers!

If this bird's-eye view isn't enough, you can select SkyView, which will allow you to change view angles of imagery in 3D and look at your target from any elevation and from any azimuth. Let's say you have selected a landing zone, but you're not sure if it's big enough for the two aircraft infilling first. You use the range and bearing tool to measure the perimeter of the potential LZ, regardless of the scale map or imagery you're using. Lastly, you want to manually highlight

DID YOU KNOW

FalconView was developed by researchers at the Georgia Tech Research Institute located in Atlanta. The majority of FalconView development was accomplished under multiple contracts with various DoD agencies. Learn more about FalconView at www.falconview.org.

EW: HERE!

CW4 MICHAEL E. CUTHBERT
U.S. Army Combat Readiness Center
Fort Rucker, Ala.

some hazards around the target. Just select your drawing tool and highlight anything from wires to tree stumps. You have virtually completed 80 percent of your ASLT target diagram. Talk about do-it-yourself target analysis!

At this point, you can print the map scale you need with the information you want on the map, including user-modified navigational information blocks. Every crew can have the same map with the same printed information.

It's evident FalconView reduces the workload of planning while adding a level of detail and accuracy required in today's mission sets. FalconView greatly enhances the safe operation of all aircraft involved in both single- and multi-ship operations. It brings all elements of planning together on one map at any scale and streamlines the communication processes.

For more information regarding FalconView, go to https://portal.mission-planning.org or contact the Army's Support Desk at 800-773-7739, Option 7. «



THE FIREWORKS D

BOB VAN ELSBERG
U.S. Army Combat Readiness Center
Fort Rucker, Ala.

When it comes to fireworks, there's a "boy" hidden inside every man. Never mind how old that "boy" is; there's something about the boom and brightly colored flashes that brings out the 10-year-old in us. When a friend called and said he'd loaded up on fireworks, the 10-year-old inside could hardly wait!

Truth be told, this was to be a holiday family get-together. My friend, Tim, invited my parents and my wife and I over for dinner and what he promised would be a spectacular fireworks display. We'd barely finished dinner before heading for the backyard, where Tim brought out a regular arsenal of Roman candles, bottle rockets and skyrockets. What really got my attention, however, was a large cardboard box honeycombed with tubes. I could only imagine what interesting things would soon be flying out of them. And marvel of marvels—you only had to light one fuse to get the whole thing going!

The box was planned as the evening's "main attraction." Wanting to save it for later, Tim and I started off by firing Roman candles and skyrockets. Looking around, I spotted a 4-foot-long metal pipe on the ground. Years of military experience taught me to recognize the perfect "mortar tube" when I saw it. We stuck one end into the ground and angled the other to miss some nearby trees. We'd light the fuse on a Roman candle or skyrocket, drop it down the pipe and then yell "fire in the hole!" Worked like a charm!

Soon it was time for the main event. We dragged the box into the yard and placed it atop a piece of concrete. Tim struck the match and lit the fuse while I shielded it from the wind. We then backed off several feet and watched.

It was awesome—the "pop-pop-pop" of Roman candles firing colored balls into the air, joined by rockets shooting up and exploding. This went on for several minutes as we waited to see what goodies the box would launch next. Finally, like an overcooked bag of microwave popcorn, the popping quit, only to be replaced by the smell of burnt paper. We gave the box a wide berth for a few minutes—just in case. Smart move. Just as we were about to walk over and pick it up, one side caught fire. I grabbed the garden hose and soaked the box.

With the box dripping all over the concrete slab, Tim and I began policing up the





debris—empty fireworks wrappers and cartons. Tim's trash can was full, so we started tossing the stuff on a bonfire Tim had built in a ring in his backyard. It was then I remembered the box. We couldn't just leave it sitting out. The kids might play with it or some animal might chew on it and get poisoned.

I went over and checked the box. I figured whatever hadn't gone off must be a dud. And if it was a dud, it was now so thoroughly soaked it would never go off. At that point, burning the box seemed like the best way to dispose of it. I explained my plan to my dad and a friend of Tim's named Esam. Both were sitting in fold-up chairs next to the fire. Neither was worried. They were as sure as I was that nothing would happen. I carefully set the box on some embers.

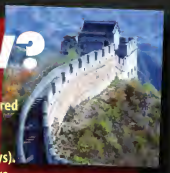
Several minutes passed as Tim and I fired off some bottle rockets. I was about to light off another when I heard a series of loud "pops" behind me. I turned just in time to see dad and Esam achieving a "four-G liftoff" from their lawn chairs, backlit by brightly colored flashes. Unfortunately, Esam had been sitting "downrange" from a volley of Roman candles. For a man in his 70s, he was amazingly agile on his feet.

When the Roman candles stopped firing and the smoke cleared, Esam was OK. Dad watched him dancing with the fireballs up close and, like the rest of us, was roaring with laughter. After his heartbeat stabilized, even Esam managed a grin. My guess is he was happy to still be alive. I'd just learned the hard way that when it comes to fireworks, the only "duds" are people who don't handle them properly.

Fortunately, no one was hurt and we all ended up laughing—but it's not always that way. During 2003, four people died from fireworks-related accidents and another 9,300 received emergency room treatment. To stay out of this year's statistics, the U.S. Consumer Product Safety Commission offers the following tips:

- Don't, under any circumstances, allow young children to play with fireworks. Even sparklers burn at very high temperatures and can easily ignite clothing.
- Older children should only be permitted to use fireworks under close adult supervision. Don't allow any running or horseplay.
- Light fireworks outdoors away from houses, dry leaves, grass or flammable materials.
- Keep a bucket of water nearby for emergencies and to pour on dud fireworks.
- Don't handle dud fireworks. Soak them with water and throw them away.
- Be sure other people are out of range before lighting fireworks.
- Never ignite fireworks in a container—especially one made of glass or metal.
- Store fireworks in a dry, cool place. Check instructions for special storage directions.
- Observe local laws.
- Never lean over skyrockets or other flying fireworks as you light them.
- Don't experiment with homemade fireworks. «

DID YOU KNOW?



Fireworks originated in China some 2,000 years ago. The most prevalent legend has it that fireworks were discovered or invented by accident by a Chinese cook working in a field kitchen who happened to mix charcoal, sulphur and saltpeter (all commonly found in the kitchen in those days). The mixture burned and when compressed in an enclosure (a bamboo tube), the mixture exploded. More facts on fireworks can be found at http://www.fireworks.com.



TOO MANY MILES

CW3 ALBERTO FRATICELLI
1/6th Cavalry
Camp Eagle, Korea

It was a typical hot summer in Alabama, with clear skies on most days and a combination of heat and humidity even a cool breeze couldn't cut. My wife was flying into the airport at Fort Lauderdale, Fla., for the weekend, but her flight didn't get in until 10 p.m. on a Thursday night. I had to work during the week, but my commander said I could take the trip as long as I requested a weekend pass.

My command approved the pass, so I got on the Internet the day before the trip to find the best route to Fort Lauderdale and check the weather along the way. The weather looked good, so I selected a route and marked it on a road map to carry with me in the car. The boss released me early and I went home, packed a small backpack with my shaving kit and a change of clothes and went out for dinner. I called my wife a little later to verify her arrival time and, after talking for a couple of minutes, we said goodbye and I went to sleep.

The alarm went off the next morning at 6 a.m. I showered, got dressed and checked the car one last time before leaving on the 10-hour drive. The fluid levels were OK and my tires were in good condition and properly inflated. I pulled out of the driveway at 7 a.m.

There was very little traffic, which made the drive a breeze. I stopped for lunch about 11 a.m. and got back on the road about 45 minutes later. Somewhere between noon and 1 p.m., my lunch hit me and I started feeling sleepy. Before I realized it or could even stop myself, I fell asleep as I was driving. I remember waking up and, thankfully, the car was

FYI

Want to get a quick online update of your travel weather? Check out The Weather Channel at http://www.weather.com/, or Accuweather at http://home.accuweather.com/ to see if Mother Nature has any nasty plans for your trip.

> "Most importantly, I **LEARNED** that **ASSESSING THE RISKS** before you take off on a long drive is as **IMPORTANT** as when you take off on a long mission."

still on the highway. I think I was asleep for only a few seconds, but a few seconds is all it takes to get killed or kill someone else on the highway.

I was surprised I'd fallen asleep but grateful I didn't get into accident. I stopped on the roadside and rested for a few minutes. Despite my close call, I made it to the airport safely, picked up my wife and spent the weekend in Florida. I planned for rest stops during the drive back and made sure we switched drivers when either of us got tired.

So what did I learn from this near miss? Whenever I'm planning a trip now, I always allow for rest stops. In addition, I no longer eat large meals if I'm driving by myself. Most importantly, I learned that assessing the risks before you take off on a long drive is as important as when you take off on a long mission. You might not come back from either one if you don't.

TRiPS

Try It, You'll Like It!

BOB VAN ELSBERG
U.S. Army Combat Readiness Center
Fort Rucker, Ala.

CW3 Albert Fraticelli took his trip just after ASMIS-1 was released and before it became commonly used. It was later updated to become ASMIS-2 and, most recently, has become the Travel Risk Planning System, better known as "TRiPS," and is now accepted and used by all U.S. military services. The program provides users with a basic map and driving directions, partially completed leave forms and the ability to review construction zone information along their route. The system provides supervisors with an overview of their peoples' plans and a starting point for a discussion with them. You'll be asked a series of questions that will be used to assess the risk level of your trip and provide suggestions, where needed, to lower that level. For example, this editor will be driving 824 miles to visit friends in Texas, but I only get five to six hours of sleep per night. To lower the "Moderate" risk level provided on my assessment, I opted to take our family car so my wife and I could change drivers. TRiPS also recommended that I plan my trip not to exceed nine hours of driving time in any 17-hour period. That lowered the risk assessment to "Low" and improves my chances of having a safer, more enjoyable trip. You, too, can take advantage of TRiPS online at https://crcapps2.crc.army.mil/ako_auth/TRiPS/default.aspx. Taking all the benefits into consideration and the five minutes of your time it takes to complete, why not use TRiPS to ensure your trip will be one the whole family will remember for the right reasons?



THE SCORPION KING



As darkness falls upon the desert, one of Iraq's most skilled hunters emerges from its home into the cool night air. In most cases, it will find exactly what it's looking for—usually a small meal or a mate. If you're not careful, however, this predator might set its sights on larger prey. What will you do if you find yourself face to face with the "thick-tailed man killer?"

Scorpions are primal arachnids (eight-legged invertebrates) that have been around for more than 350 million years. They are found from seashores to mountaintops on every continent except Antarctica and are related to spiders, mites, ticks and solifugae (camel spiders). Scorpions are nocturnal predators that leave their burrow for two reasons, either getting a meal or mating, both of which can place them in your path.

The most common of these predators found in Iraq is Androctonus crassicauda, or the thick-tailed man killer. This potentially deadly species of scorpion is dark reddish-brown to black with slender pincers and can reach lengths greater than 4 inches. As its name implies, it can be easily identified by its thick tail, which can be as big around as a pinkie finger.

This species appears more abundant because they are comfortable in human environments and are, therefore, more likely to be seen. They can be found anywhere a Soldier is likely to be—from a hooch to the motor pool—because they will crawl into and under anything to hide from the desert sun. In fact, Soldiers and scorpions have been at odds for a long time. Thousands of years ago, in what is today Iraq, locals placed these scorpions into clay jars and threw them at advancing Roman troops.

Increased chances of interactions are what make this predator responsible for many of the scorpion stings in the Middle East. Two scientific journals report more than 10,000 hospital-attended sting cases from a "black scorpion [probably Acrassicauda]" during one year in Saudi Arabia and Iran. Probably many more are reported or go unreported—perhaps as many as 100,000 stings per year across the Middle East.

For a military unit like mine, which operated in derelict or reconstructed areas, stings did occur. According to our battalion's physician's assistant, 1LT Christopher Vannucci, there were dozens of unknown bites/stings. Three

CON

SGT ALEXANDER K. STEWART
21st Engineer Combat Battalion, (Heavy)
Department of Geology, University of Cincinnati



of these were identified as scorpion stings, with feet and hands being the most common sting locations. Although three scorpion cases may seem like an insignificant number, these were only the verified cases.

To minimize your chance of getting stung, it is helpful to understand this scorpion's behaviors. For instance, a night-in-the-life of one of these critters may go something like this:

It's early evening nautical twilight and its time for the thick-tailed man killers to leave their burrows to seek out a mate or a tasty morsel (any insect, spider or even another scorpion). The scorpion will roam close to man-made structures (hooch, house or wall) while it remains dark and will continue until it completes its mission of meal, mate or begin morning nautical twilight, when they will dash for darkness.

These scorpions prefer to seek shelter in the burrow where they spent the previous day, but will go inside a boot or under a rucksack, pallet or other equipment if convenient. Most stings occur when the scorpion is upset from its hiding place. The scorpion will react to protect itself from what it views as a predator, which includes you. The initial sting may produce symptoms such as intense pain and inflammation, numbness, frothing at the mouth, difficulty or inability to breathe with possible muscle spasms and convulsions. According to 1LT Vannucci, the symptoms in his cases were more often reported as throbbing, burning and/or itching.

If you are unfortunate enough to get stung, your battle buddy should carefully kill the scorpion for identification and take you and it directly to the nearest medic/aid station. Some people may be allergic to the scorpion's venom and may enter anaphylactic shock, so it is imperative you immediately seek medical attention.

While I was stationed in Iraq, I completed a rigorous behavioral study using Androctonus crassicauda as my test subject and have a few pointers for commanders and their Soldiers. Essentially, to maintain a fit fighting force, I recommend the following prevention strategies for the thick-tailed man killer:

- Treat these animals with respect and do NOT play with them; they are potentially deadly.
- Always be aware of yourself, your gear and equipment, such as where you put it and how you move it.
- Never go to the latrine or shower barefoot or in shower shoes; wear physical fitness shoes or, even better, boots.
- Remove loose debris and piled stucco or wall materials accumulating at the base of derelict structures.
- Eliminate conditions (like poorly drained sanitary water) that might attract the scorpion's prey (like cockroaches).
- Seal wall cracks or open masonry with caulking or cement—especially at wall bases.
- Screen or weather strip doors, windows and vents.

If the above prevention strategies are not enough, apply one of the following:

- Carefully and quickly dispatch the scorpion with the heel of your boot.
- If an infestation is suspected, have your supply or field-ordering officer purchase a pesticide such as permethrin (Prelude®, Dragnet®) or cypermethrin (Demon®) and apply per instructions to the problem area.

Remember, the desert has been this scorpion's home for millions of years; you're just a visitor. Treat them with the respect they deserve and you'll avoid falling victim to the thick-tailed man killer. ≪

Editor's note: SGT Alexander Stewart was deployed in support of Operation Iraqi Freedom II (Iraq and Kuwait) from December 2003 to May 2005. While stationed in northern Iraq, 50 km north of Samarra, he served as the battalion S-3 (operations) communications chief, historical officer and "Trailblazer," or volunteer route clearance (IED/VBIED) leader. He also spent four months during the summer researching this scorpion species, completing a prey-capture analysis, habitat preference analysis and activity-level analysis.



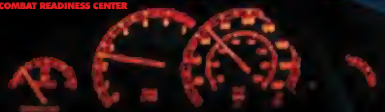
DID YOU KNOW?

The deserts and highlands of Iraq, Kuwait and Afghanistan are crawling with arachnids such as scorpions, spiders and solpugids, or camel spiders. Three of the deadliest scorpions in the world call Iraq and Kuwait home, and at least three venomous spiders—the black widow, tarantula and yellow sac spider—are found in both countries. Several species of scorpion are native to Afghanistan, as are the black widow, tarantula and camel spider. Soldiers should never handle any of these creatures and always shake out their shoes, bed linens or sleeping bags and clothing to prevent bites. A full-color poster showing the arachnids found in theater can be downloaded off the Army Center for Health Promotion and Preventive Medicine's Web site at http://chppm-www.apgea.army.mil/deployment/arachnidsofiraqandkuwait.pdf.

What price would you pay to go partying? Would you consider paying with your life? Sometimes the price of a good time can be very high.

THE PRICE OF THE PAR

U.S. ARMY COMBAT READINESS CENTER



The young NCO was tired as he drove his German sports sedan down the autobahn. He and his three passengers, a couple of junior enlisted Soldiers and the civilian girlfriend of one of them, had partied from just after midnight till about 4 a.m. The Soldiers had to get back in time for the morning PT formation, and the young NCO was pushing hard on the gas pedal. Although the recommended autobahn speed limit was 130 kilometers per hour—or 80 mph—he was doing more than 110 mph. The Soldiers had gotten into a lifestyle of partying well into the morning hours and then rushing back to post for formation.

They'd been on the road for about 20 minutes and had covered 38 of the 61 miles back to post. The young NCO looked ahead, saw a couple of tractor-trailers in his lane and moved to the left to pass them. It had rained lightly earlier that morning and the road was still a bit wet. He flew past the first tractor-trailer and was swiftly overtaking the second. For whatever reason, perhaps because he was tired or, possibly, because his vision was obscured by rainwater swept onto his windshield, he didn't see the left-hand curve ahead. Instead of rounding the curve, the car went straight and struck the tractor-trailer's left-rear drive wheels. The impact spun the car counterclockwise 360 degrees. The car then slammed into the left-rear corner of the trailer. Now jammed beneath the trailer, the car was dragged 100 yards down the road before the truck's driver could stop.

The damage to the car was horrendous. The impact had crushed the car's roof, pushing it rearward and to the left. Despite the roof crushing to within 6 inches of his head restraint, the young NCO survived, opened his door and got out. He then went to the left-rear door and got the young woman out of the car. After trying to talk to the truck driver and taking the girl to the truck's cab to keep warm, the NCO went back to check on the other two Soldiers in his car. Neither showed any

FYI

Looking for information relating to driver's training? Visit the POV Toolbox at the USACRC Web site https://crc.army.mil/ for information on establishing and maintaining an effective driver's training program. The toolbox is a onestop shop for Commanders, leaders,

signs of life. Both had been sitting on the right side of the car—one in the front seat and one in the backseat—and died when the car's roof was crushed during the accident.

Why did this accident happen?

- The driver was overconfident and fatigued and drove beyond his abilities for the conditions. Because of his fatigue and, possibly, his vision being obscured by rainwater swept onto his windshield, he lost situational awareness. Because he didn't recognize he was entering a left-hand curve, he drove straight and collided with the truck.
- The driver was traveling at an excessive speed when he attempted to pass the tractor-trailers. As a result, he lacked the reaction time needed to avoid the collision.
- The driver showed poor discipline by disregarding his leaders' directions regarding his off-duty activities. His pattern of partying until the early morning hours had affected his on-duty performance, and his leaders had directed him to discontinue that behavior.

Recommendations

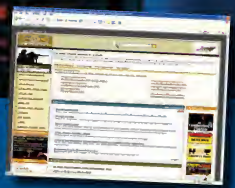
The following recommendations are provided to help prevent future losses:

- Educate Soldiers on the dangers posed by driving at night, fatigued and in bad weather conditions to help them recognize their own driving limitations.
- Educate Soldiers on the dangers of driving at excessive speeds and how such speeds deny them the reaction time needed to avoid an accident.
- Commanders must ensure young NCOs understand their responsibilities as junior leaders and recognize how indiscipline on their part affects the Soldiers they supervise. Commanders must also take action to identify, counsel and follow-up with Soldiers who display high-risk behaviors.

Concluding thoughts

Losing a Soldier to an off-duty accident reduces unit readiness as much as losing one on duty. Because of that, leaders can't afford to look only at the impact on duty performance caused by a Soldier's unsafe off-duty behavior. A leader's responsibility for his Soldiers' safety doesn't stop at the end of the duty day or at the front gate. It's a 24/7 mission.

> "A **LEADER'S** responsibility for his Soldiers' safety **DOESN'T STOP** at the end of the duty day or at the front gate. **IT'S A 24/7 MISSION.**"



noncommissioned officers and individuals and offers an abundance of driver training resources. Taking care of our Soldiers behind the wheel both on duty and off duty keeps our Army Strong!



AVIATION

MH-47



CLASS C K Model

■ The No. 2 engine experienced an oil leak during a post-maintenance operational check run-up.

OH-58



CLASS A D(R) Model

■ A pilot and co-pilot were injured when their aircraft crashed while performing a convoy security mission. The cause of the crash and sequence of events are undetermined at this time. The U.S. Army Combat Readiness Center is investigating the accident.

CLASS C

■ Aircraft experienced an engine overspeed condition (122 percent for 3 seconds) during FADEC-manual mode operations.

■ During an aircraft run-up on the ground without any collective applied, the aircraft started to overspeed the engine and rotor system. The pilot immediately reduced the throttle to idle, which remedied the overspeed; however, the FADEC monitor page displayed NP was 124 percent and NR within limits. The aircraft was shut down and maintenance was contacted.

■ Aircraft experienced an engine overspeed condition during a low-level autorotation.

UH-60



CLASS A A Model

■ While on a basic combat skills

training flight, the pilot attempted to conduct a roll-on landing at a stagefield and subsequently crashed. A Department of Army Civilian was killed in the crash and the remaining three crewmembers suffered non-life-threatening injuries.

CLASS C L Model

- The slingload inadvertently separated from the aircraft about 50 meters from the runway during short final for landing.

- The main rotor blade of the trail aircraft in a ferry flight of three made contact with the MRB of the second aircraft while ground taxiing to parking. Both aircraft suffered damage.

DO YOU EMPLOY THE PRINCIPLES OF COMPOSITE RISK MANAGEMENT TO ALL MISSIONS?

UAS

RQ-7B



CLASS B

- The unmanned aircraft system engine failed on approach to recovery site and impacted the ground, resulting in a total loss.

CLASS C

- The aerial vehicle operator experienced engine RPM-droop during flight. The recovery chute was deployed, but the UAS suffered damage on ground contact.

- The AVO experienced a FLIGHT SERVO FAIL reading during landing. The aircraft ultimately experienced a subsequent fuel exhaustion ENGINE-FAIL. The recovery chute deployed and the aircraft was recovered with damage.

GROUND

ACV



CLASS A

- A Soldier drowned when his M2A3 Bradley Fighting Vehicle flipped into a canal. The Soldier had been driving along the canal when the road gave way and the BFV slipped down an embankment and into the water. The tank commander and gunner escaped without injury.

CLASS A (DAMAGE)

- An M2A3 was destroyed when a fire started inside the vehicle. A Soldier attempted to put out the fire with the onboard extinguishing systems, but detonation of onboard ammunition forced him to evacuate.

CLASS B (DAMAGE)

- An M2A2 BFV was being recovered via an M88 when a fire started in the M2A2's transmission. The recovery crew was able to extinguish the fire, but not before the vehicle sustained Class B damage.

AMV

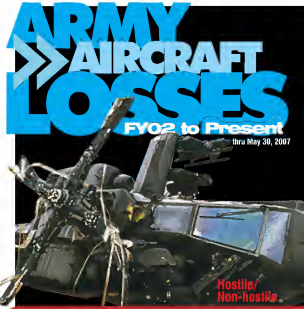


CLASS A

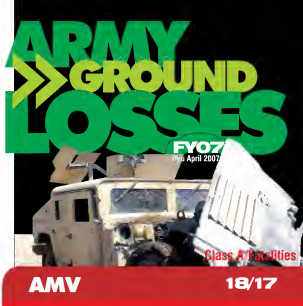
- Two Soldiers drowned when their M1114 HMMWV overturned. The Soldiers were returning from a trip to the PX when the vehicle slid down an embankment and came to rest upside down in a canal. The driver of the HMMWV was not injured. Seat belt use was not reported.

HAVE YOU REHEARSED YOUR ROLLOVER DRILLS?

- Two Soldiers were killed when their HMMWV collided with a privately owned tractor-trailer. After the collision, the



AH-64A/D	11/46
U/MH-60A/L	8/24
C/MH-47	6/14
OH-58D	9/22
TOTAL	34/106



AMV	18/17
ACV	13/7
PERSONNEL INJURY	23/22
WEAPONS HANDLING	3/3
FIRE/ EXPLOSION	2/0
TOTAL	54/46

HMMWV ran off the road and down a 30-foot embankment. The driver and a passenger in the HMMWV were fatally injured. A third Soldier who was riding in the vehicle was not injured. Seat belt use was not reported.

CLASS B (DAMAGE)

- An F350-model ambulance was damaged when it struck the main rotor system of a parked UH-60 aircraft while driving on an airfield. The driver of the ambulance was not injured.

Personnel Injury

CLASS A

- A Soldier suffered fatal injuries when he was struck by a round from his roommate's M4 weapon. The roommate had been cleaning the weapon when it discharged.

ARE YOUR SOLDIERS PRACTICING PROPER WEAPONS HANDLING?

- A Soldier was struck and fatally injured by a POV as he was crossing the eastbound lane of an interstate highway. The Soldier, along with two other Soldiers, had crossed the interstate earlier in the evening to go from their hotel to a pub to have dinner, during which all three drank alcohol. As they attempted to return across the interstate to their hotel, one of the Soldiers was struck by a POV. The Soldier was transported to a local medical center, where he later died.

- A Soldier was at a party when he fell from the third floor balcony. He was hospitalized with minimal brain activity and placed on life support. His injuries have been determined to represent a permanent total disability.

DO YOUR SOLDIERS UNDERSTAND ALCOHOL IMPAIRS THEIR JUDGMENT?

CLASS B

- A Soldier suffered a permanent partial disability while handling foreign munitions. The Soldier was inventorying an Afghan National Army ammunition supply point when he picked up a grenade to demonstrate/describe how it is used. The grenade detonated, amputating the Soldier's right hand.

- A Soldier suffered a permanent partial disability when he was shot in the back of the neck with a round from a 9 mm pistol. Another Soldier had been cleaning the weapon and dropped it, causing a round to discharge.

DRIVING

POV

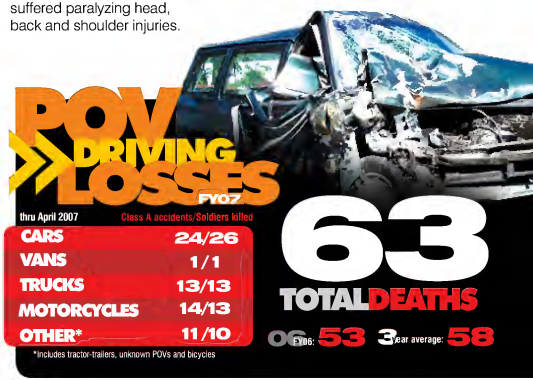
CLASS A

- A Soldier was riding as a passenger in a POV that was involved in a single-vehicle accident. As a result, the Soldier suffered paralyzing head, back and shoulder injuries.



- A National Guard Soldier was returning from Active Duty Support Work when his SUV overturned into a water-filled ditch. The vehicle came to rest inverted, trapping the Soldier and a passenger. The Soldier drowned.

- Two Soldiers were en route to post when the driver lost control of his POV and struck a telephone pole and an embankment. The Soldier who was riding as a passenger suffered a paralyzing spinal injury.



POV DRIVING LOSSES FY07

thru April 2007

Class A accidents/Soldiers killed	
CARS	24/26
VANS	1/1
TRUCKS	13/13
MOTORCYCLES	14/13
OTHER*	11/10

*Includes tractor-trailers, unknown POVs and bicycles

63 TOTAL DEATHS

FY06: 53 3 year average: 58

WEAR YOUR SEAT BELTS!



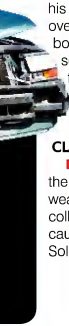
A Soldier was speeding around a curve in his SUV when he hit a set of railroad tracks, lost control, struck a culvert and rolled over. The Soldier, who wasn't wearing his seat belt, was ejected from his vehicle and killed.

HAVE YOU TOLD YOUR SOLDIERS SEAT BELTS INCREASE THE ODDS FOR SURVIVAL IN A CRASH BY 80 PERCENT?

DO YOUR SOLDIERS WEAR THEIR SEAT BELTS?

A Soldier was driving his POV when he lost control and overturned several times. The Soldier was hospitalized and taken off life support the following day. The Soldier was not wearing his seat belt.

Two Soldiers were on an off-ramp when the driver lost control of his vehicle, struck the guardrail and overturned three times. Although both Soldiers were wearing their seat belts, the driver suffered fatal injuries. The passenger was taken to a local medical center and listed in stable condition.



CLASS C

A Soldier was driving under the influence of alcohol and not wearing his seat belt when he collided with a bus. The collision caused serious injuries to the Soldier and his passenger.

POM



CLASS A

A Soldier was thrown from his motorcycle and killed when he moved to the right lane to pass a vehicle and rear-ended a tractor-trailer that was slowing to turn off the road. The Soldier had owned his bike for less than 12 days and was neither licensed nor had taken the required Motorcycle Safety Foundation training.

DO YOU KNOW WHO RIDES IN YOUR UNIT? HAVE YOU MADE SURE THEY'RE TRAINED?

A Soldier was operating his motorcycle on a highway when a vehicle failed to yield right-of-way from a side street and struck the Soldier's motorcycle. The Soldier, who was wearing his helmet and personal protective equipment, suffered fatal injuries.

Two Soldiers were operating their motorcycles when the lead rider entered an intersection and struck a truck that failed to yield right-of-way. Despite wearing his helmet and all PPE, the lead rider was fatally injured. The following rider managed to avoid the truck, but also crashed and suffered minor injuries.

A Soldier was operating his motorcycle over a canal bridge when another vehicle moved into his lane. The Soldier attempted to move to the right to allow more room but lost control, dropped his bike and slid to a stop. The Soldier was transported to a hospital, where he was treated for a broken shoulder. The Soldier was wearing his PPE; however, military police determined from the length of his skid that he was riding at an excessive speed.


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